SDST Report

- Beta Delivery
- Version 1 Delivery
- TL-SCF Development
- Testing

MODIS SDP S/W Release Goals

Beta (January 1996):

- Demonstrate complete science processing chain L0 to L3
- SDP TK integrated into science software
- All products stored in HDF
- Software meets ESDIS standards

Version 1 (January 1997):

- Science algorithms implemented per ATBDs
- Science software fully integrated within discipline
- Ancillary and LUT data are used
- Realistic resource usage, timing and operations

MODIS Beta Delivered

- 31 of 39 at-launch standard products
- Comprehensive software delivery from L0 to L3
- Meets ESDIS and MODIS software standards*
- Uses all SDPTK5 functions as required
- Performs all I/O using HDF 3.3r4
- Includes error checking of HDF calls
- Includes comprehensive test data at all levels (L0 to L3)
- Runs in the IR-1 DAAC environment
- Has at-launch documentation suite (DID 305)

* I*2, pmake waivered

1996 TLCF Plans

- Configure TL-SCF for testing MODIS operational software
  - Increase RAID storage
  - Move RAID to Fiber Channel loop
  - Add automated tape library
  - Upgrade processors to R10000
  - Configure modis-xl and modispc identically

TL-SCF

- modis-xl and modispc
  - R10000 4 in modis-xl and 8 in modispc
  - 2GB memory 4 way interleaved in both
  - 250GB host and network attached storage
- Challenge DM for Land s/w integration
- Additional 356GB disk storage in May/June
- 200GB Fibre Channel disks in July/August
- 10TB tape archive July/August
- ATM link to EDC up again through ATDNET
  - Distributed computing
- Improving LANs to GSC and within GSFC

MODIS Version 1 Goals

- Shift of emphasis
  - from integration into the DAAC
  - to integrated MODIS science
- Handle ancillary data
- Benchmark at-launch resource needs
- Deliver complete at-launch product set

Version 1 Delivery

- All 39 at-launch products
- HDF 4.0
- SDP-TK 6
- ECS Core Metadata +
- More extensive error handling
- More software optimization
- Many integrated threads

V1 Schedule

- Advertised on MODIS Programmer's Forum
  - Fever chart of science software deliveries
  - Schedule of software development
- Schedule shows negotiated delivery dates
- Staffing based on phased delivery
- Your timely deliveries are essential

Deliveries

- Level 1B (Guenther)
- Surface Reflectance (Vermote)
- Vegetation Index (Justice)
- Utility Mask (Menzel)
- Oceans w/o MODIS I/O (Evans)
- *LAI/FPAR (Beta)* *(Running)*

As of 4/24/96

May

• Ocean Color	Evans
• Sea Surface Temp.	Evans
• Ocean Productivity	Esaias
• Atmosphere Level 2	Atmosphere
• Land Level 2	Land
• Land Level 2G	Land

June

- Aerosol Product — Kaufman
- Land Levels 3,4 — Land Team

July/August

• Geolocation	SDST
• Level 1A	SDST
• Ocean Match-up	Evans
• Aerosol Daily	Kaufman
• Cloud Product	King

September

- **Joint Product** **Atmosphere**

Joint Efforts with ESDIS

- Software Optimization
  - Improve performance of MODIS "tall poles"
    - measure
    - optimize
    - compare output
  - Run software on the MODIS TL-SCF
  - CSC (ESDIS) , Tung Lau (SDST)

Joint Efforts with ESDIS

- Test of ECS system with MODIS workload
  - In the planning stage with ESDIS and HAIS
  - Schedule is being worked by:
    - Masuoka, Fleig and Fishtahler (MODIS)
    - Banks, Schroeder, Kempler, Scott (ESDIS)
    - Fingerman (HAIS)
  - Will be covered by Fleig in this briefing

EOSDIS Cost Growth

- EOSDIS 75M beyond budget
- Most is in Pull Side
- Some in Instrument Teams
- A little in housekeeping

Where we can help (cont.)

- Flexibility in Design
- Optimizing Our Software
- Reviewing Growth
  - Review within disciplines
  - Review within MODIS Team
  - External Review
- Reviewing Costs in EOSDIS

Where we can help

- **Phasing production at-launch**
  - TL-SCF does more at-launch debugging
  - TL-SCF may need better connection to the DAAC
- **Reprocessing Strategy**
- **Predicting Pull side**
  - Level 1 and Level 2, low demand no subsetting
  - L3, L4 high demand, subsetting